

**Testimony of Ford Motor Company
To Senate Committee on Energy Policy and Public Utilities
Regarding National Safety Council (NSC) Cell Phone Use While Driving Fact Sheet**

February 5, 2009

Mr. Chairman and members of the committee, my name is Louis Tijerina and I am a Senior Technical Specialist with Ford Motor Company. Today, I am here to comment on claims of fact recently made by the National Safety Council regarding cell phone use while driving.

- *NSC: "Using cell phones while driving is a very high risk behavior with significant impact on crashes and society. More than 50 peer-reviewed scientific studies have identified the risks associated with cell phone use while driving."*

Ford Comments: The majority of the literature cited is based on simulator or closed-track studies. More recent naturalistic studies^{1, 2} do not indicate that using cell phones while driving is a high risk behavior based on real-world data collection methods that capture driver choice and perceived risk associated with immersion in actual traffic and roadway conditions.

- *NSC: Drivers who use cell phones are four times more likely to be in a crash while using a cell phone. (1997 New England Journal of Medicine examination of hospital records and 2005 Insurance Institute for Highway Safety study linking crashes to cell phone records).*

Ford Comments: These studies try to roughly pair the crash time (inexact) with the time of cell phone use (exact). The 1997 New England Journal of Medicine Study³ and the IIHS study⁴ use epidemiological methods that can generate biased risk estimates if one does not know accurately the time of cell phone calls (exact) and crash occurrence (inexact). The Canadian Transportation Safety Laboratory found⁵, for example, that 77% of a sample of over 2000 police accident reports had crash times recorded that multiples of (i.e., are rounded to the nearest) 5 minutes, with 42 percent in multiples of 15 minutes (i.e., 'clumping' in quarter-hour or half-hour), suggesting the imprecision in crash occurrence times. They also analyzed a sample of 104 cases where time of emergency calls were provided by cell phone companies and discovered that 61% of them were reported BEFORE the reported time of the collision. Redelmeier and Tibshirani (1997)³ attempted to control for this by classifying collision times as 'exact' if subject statements, police records and telephone listings of calls to emergency services all agreed. However, police records would be influenced by subject statements, rounding errors would falsely increase the degree of agreement, people make calls after a crash that are not necessarily to emergency services, and calls to emergency services, as indicated earlier, often occur before the reported emergency. Other epidemiological studies⁶ that do not use such methods report relative risk ratio of approximately 1.38 for all cell phone users, with levels dropping to 1.1 for men and 1.2 for women when adjustments are made for factors like vehicle miles traveled and driving habits. For infrequent users, the risk is no different than baseline of driving without cell phone use.

- *NSC: There is no difference in the cognitive distraction between hand-held and hands-free devices. (Simulator studies at the U. of Utah.)*

Ford Comments: One would not expect differences in the conversational component. Very long and intense conversations can certainly be distracting. However, there are many studies^{7, 8} that find voice interfaces are better than visual-manual interfaces when the same task is done while driving. Recent naturalistic driving studies (see below) also indicate that it is visual distraction, not cognitive distraction, that is the main problem in real-world driving.

- *NSC: Cell phone use contributes to an estimated 6 percent of all crashes, which equates to 636,000 crashes, 330,000 injuries, 12,000 serious injuries and 2,600 deaths each year. (Harvard Center of Risk Analysis).*

Ford Comments: NSC selected a study that may have over-estimated risk, while ignoring a companion study that indicated there are certain safety benefits that result from cell phone usage while driving. The numbers NSC cites are based, in part on the risk ratios of Redelmeier and Tibshirani (1997)³ which are likely to be biased due to inexact times reported on when crashes occurred. Other large-scale epidemiological studies⁶ that use different methods estimate the relative risk to be nearly 4 times lower than Redelmeier and Tibshirani's estimates. The

Harvard study was actually the 2nd of two studies by Harvard.^{9, 10} The first report, not cited by NCS, does not report such large effects. The first Harvard report also includes a listing of benefits associated with cellular telephones that are not mentioned in the NSC Fact Sheet. The first study indicates that cell phones help to prevent unnecessary trips, provide parental and familial peace-of-mind, report criminal activity (i.e., drunk driving), convey details of emergencies and shorten accident response time, increase mental alertness during long monotonous drives, enhance social connectedness and improve productivity.

- *NSC: 80 percent of crashes are related to driver inattention. There are certain activities that may be more dangerous than talking on a cell phone. However, cell phone use occurs more frequently and for longer durations than other, riskier behaviors. Thus, the #1 source of driver inattention is cell phones. (Virginia Tech 100-car study for NHTSA.*

Ford Comments: The VTTI study found that visual distraction, not cognitive distraction, is the main problem. What the VTTI 100-Car Study^{1, 11} actually says is the following. "An important finding of this report is that almost 80 percent of all crashes and 65 percent of all near crashes involved the driver looking away from the forward roadway just prior to the onset of the conflict." (Dingus, et al., 2006) "The important finding in this regard is that 93 percent of all lead-vehicle crashes (14 out of 15) involved inattention to the forward roadway as a contributing factor." (Dingus, et al., 2006) "Dialing handheld device" had statistically significant risk ratio of 2.79 "Talking/Listening to handheld device" risk ratio (1.3) was not statistically significant different from 1.0 The basis for identifying cell phones as the #1 source of driver inattention is unclear but may be based on Percentage Attributable Risk (PAR) values that, for the case of cell phones, were calculating using a statistically non-significant (i.e., statistically unreliable) odds ratio.

- *NSC: It is estimated that more than 100 million people use cell phones while driving. (CTIA – The Wireless Association reports 270 million cell phone subscribers. A Nationwide Insurance public opinion poll showed 81 percent of the public admit to talking on a cell phone while driving).*

The actual number was 73%. It is clear that the public has embraced wireless technology and are using it in their vehicles. It is also clear from recently follow-up studies of the impact of legislation banning hand-held cell phones that people may comply for a period after the laws are enacted but, consistently, use returns to pre-law levels within about 1 year.

Ford Motor Company believes legislators and regulators need accurate risk assessments to guide policy decisions. The NSC has called for prohibitive laws (a total ban on cellular telephone technology while driving) when small relative risks suggest milder interventions such as education and outreach programs may be more appropriate. Studies and fact sheets overstating a small relative risk can mislead decision makers into making serious mistakes that can actually thwart effective systems that improve safety. We look forward to sharing additional information about this complex issue with you in the future.

References available upon request.